

Reply Under 37 C.F.R. § 1.116 – Expedited Procedure
Serial No.: 09/924,785
Examiner: Shaima Q. Aminzay

REMARKS/ARGUMENTS

Claims 1-20 are pending. Claims 21 through 25 have been added. Claims 1-4, 9, 11-13, 15-18, and 20 have been amended.

Rejections under 35 U.S.C. § 103

Claims 1-20 stand rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 5,862,481 to Kulkarni, et al. ("Kulkarni") in view of U.S. Patent No. 5,933,784 to Gallagher, et al. ("Gallagher"). It is submitted that the Office action does not factually support a prima facie case of obviousness based on Kulkarni and Gallagher for the following reasons.

Even when combined, the references fail to teach or suggest all claim elements

As provided in MPEP § 2143, "[t]o establish a prima facie case of obviousness, ... the prior art reference (or references when combined) must teach or suggest all the claim limitations." Either alone or in combination, the Kulkarni reference and the Gallagher reference fail to teach or suggest the requirements of the claims.

Claims 1-8

As amended, claim 1 recites, "a wireless media gateway (WMG) implemented in the first network connected to at least one mobile switching center (MSC) of the first network, the MSC communicating with the MS for providing a wireless communication service by the first network thereto; a wireless switch device (WS) implemented in the second network connected to the at least one MSC in the first network, and the WMG in the first network; a service management subsystem that supports the wireless network service in the first and second network, wherein the service management subsystem is connected to the wireless switch device in the second network; wherein the wireless network service provided to the MS in the first network is controlled by the service management subsystem, the WMG of the first network, and the WS in the second network."

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As explained in the specification in paragraphs 2 through 8, on pages 1 to 3, current solutions required duplicative service subsystems in networks with different technologies, to provide network services such as prepaid billing services, data services, etc. As seen in Figure 1, two networks with different technologies (IS41 and GSM in this case) has to have an SCP and a billing system to provide the Prepaid Services. The claimed invention provides the advantage that one service system can support the network services in two networks with different technologies, as seen in Figures 2 through 8. The network services, such as prepaid billing services, email, etc., are provided by one subsystem under the control of one network, in this case the GSM network. The GSM network then communicates with the IS41 network in one of several manners, such as directly from one MSC to another MSC or through a wireless softswitch and WMG, to control provision of the network services in the IS41 network.

The Kulkarni reference fails to disclose or suggest the requirement of claim 1, *inter alia*, of, “a service management subsystem that supports the wireless network service in the first and second network, wherein the service management subsystem is connected to the wireless switch device in the second network.” The Kulkarni reference fails to disclose any type of service management subsystem for providing network services, such as prepaid billing services, data services, etc. or to even discuss the possibility of using one service management subsystem to support two networks with different technologies. The Office Action cites column 3, lines 58 through 69, as an example of a service management subsystem for the wireless network service. This section merely discusses the handling of requests for authentication or registering a GSM terminal roaming in an IS41 network. There is no disclosure of providing network services by either the GSM terminal or the IS41 network, such as prepaid billing services, data services, etc. or to even discuss the possibility of using one service management subsystem to support two networks with different technologies.

The Kulkarni reference also fails to disclose or suggest the requirement of claim 1, *inter alia*, of “a wireless switch device (WS) implemented in the second network connected to the at least one MSC in the first network and the WMG in the first network.” As stated in the Office

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action on page 3, the Kulkarni fails to teach a wireless media gateway (WMG) implemented in a first network connected to at least one mobile switching center (MSC) of the first network, and a wireless switch device (WS) implemented in the second network connected to the at least one MSC in the first network.

Furthermore, the Kulkarni reference fails to disclose or suggest the requirement of claim 1, *inter alia*, of, “wherein the wireless network service provided to the MS in the first network is controlled by the service management subsystem, the WMG of the first network, and the WS in the second network.” As explained above, there is no disclosure of a service management subsystem that supports the first and second network in the Kulkarni reference. And the Kulkarni reference admittedly fails to disclose a WMG in the first network connected to the MSC of the first network, and the WS in the second network connected to the MSC in the first network. Thus, it certainly can not disclose that the service management subsystem, the WMG and the WS control provision of the wireless network service to the first network.

The Gallagher reference fails to disclose or suggest the deficiencies of the Kulkarni reference. As with the Kulkarni reference, the Gallagher reference fails to teach or suggest the requirement of claim 1, *inter alia*, of, “a service management subsystem that supports the wireless network service in the first and second network, wherein the service management subsystem is connected to the wireless switch device in the second network.” The Gallagher reference fails to disclose any type of service management subsystem for providing network services, such as prepaid billing services, data services, etc. or to even discuss the possibility of using one service management subsystem to support two networks with different technologies.

The Gallagher reference also fails to disclose or suggest the requirement of claim 1, *inter alia*, of “a wireless switch device (WS) implemented in the second network connected to the at least one MSC in the first network and the WMG in the first network.” The Office Action states that Gallagher teaches “a wireless switch device (HLR, 204) of the second network (DCS1900 (GSM) home system) connected to the at least one MSC (106) in the first network through signaling network (108).” However, a reading of the associated text of Gallagher reveals that

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"[t]he signaling gateway receives signals transmitted by the home system's HLR 110B and signals transmitted by the MSC/VLR 106A-B of the visited system." (col. 5, lines 29-32). The following text of Gallagher (e.g., col. 5, line 32 – col. 6, line 4), as well as Figs. 5a, 5b, and 8, illustrate how "[c]ommunication signals that are transmitted from a first communication system to a second communication system and transmitted from the second network to the first network are received and transmitted by the signaling gateway." (Abstract). In fact, Fig. 5a clearly illustrates a scenario where the HLR 110B (NTWK Type A) communicates through the gate unit 202 with a different network type (MSC/VLR 106A – NTWK Type B) and only bypasses the gate unit when communicating with an MSC of a compatible network type (MSC/VLR 106C – NTWK Type A).

Furthermore, the Gallagher reference fails to teach or suggest the requirement of claim 1, *inter alia*, of, "wherein the wireless network service provided to the MS in the first network is controlled by the service management subsystem, the WMG of the first network, and the WS in the second network." As stated above, the Gallagher reference nowhere discloses a service management subsystem to provide a wireless network service in a first and second network and so necessarily fails to disclose or suggest that the wireless network service provided to the MS in the first network is controlled by the service management subsystem, the WMG of the first network, and the WS in the second network.

The combination of Kulkarni and Gallagher fails to teach or suggest the requirements of the claims. The combination fails to meet the standard presented by MPEP § 2143 which, as stated above, requires that the combined prior art references must teach or suggest all the claim limitations to establish a *prima facie* case of obviousness. Neither reference discloses or teaches the claim elements as explained above. In addition, there is no motivation to combine the references. The Office Action fails to explain how the Gallagher reference and Kulkarni reference would be combined to make an operable system. The Gallagher reference discloses a Gateway unit (206) connected to a SS7 signaling network (108) to communicate to MSC/VLR (106) of an IS41 system and HLR (110B) of the DCS1900 home system. The Kulkarni reference

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discloses a GSM to IS41 Roaming Proxy (GIP) connected directly between an HLR of the GSM system and VLR of the IS41 system, as seen in Figure 5 of the Kulkarni reference. There would be no motivation to combine Gallagher with Kulkarni when the Kulkarni reference already has a GIP for translating protocols between an HLR of the GSM system and VLR of the IS41 system. How and why would the gateway unit of the Gallagher reference be incorporated? Wouldn't this combination just be duplicative methods that are incongruous and costly and complex? And even if somehow combined, there is still no teaching of the above claim elements.

Accordingly, claim 1 is allowable over the Kulkarni reference and the Gallagher reference. Claims 2-8 depend from and further limit claim 1 and are allowable over the combination of Kulkarni and Gallagher for at least the same reasons as noted above with respect to claim 1.

Claims 9 and 10

Claim 9 states, “an interface device implemented in at least one mobile switching center (MSC) of the second network enabling the MSC in the second network to communicate with at least one MSC in the first network; and a service management subsystem connected to the MSC in the second network that supports the wireless network service in the first network and the second network, wherein the service management subsystem provides control information to the MSC in the first network through the MSC in the second network for managing the wireless network service initiated within the first network.” The Gallagher reference and the Kulkarni reference fail to teach or suggest the requirements of claim 9, either alone or in combination.

As explained above, neither the Gallagher reference nor the Kulkarni reference disclose any type of service management subsystem for providing network services, such as prepaid billing services, data services, etc. or to even discuss the possibility of using one service management subsystem to support two networks with different technologies.

Furthermore, neither the Kulkarni reference or the Gallagher reference, whether taken alone or in combination, teach or suggest the requirements of claim 9 of, “an interface device implemented in at least one mobile switching center (MSC) of the second network enabling the

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MSC in the second network to communicate with at least one MSC in the first network.” The Gallagher reference discloses a Gateway unit (206) connected to a SS7 signaling network (108) to communicate to MSC/VLR (106) of an IS41 system and HLR (110B) of the DCS1900 home system. The Kulkarni reference discloses a GSM to IS41 Roaming Proxy (GIP) connected directly between an HLR of the GSM system and VLR of the IS41 system, as seen in Figure 5 of the Kulkarni reference. Thus, neither reference discloses an interface device implemented in the MSC of a second network to communicate with at least one MSC in the first network.

Claims 11-17

Claim 11 states, “receiving a request for the wireless network service in the first network by a mobile switch center (MSC); obtaining an instruction to grant or deny the wireless network service from a first control device in the second network, the first control device providing the instruction based on its communication to a service management subsystem for the control of the wireless network service; if the wireless network service is granted, a second control device in the first network controlled by the first control device allowing the MS to execute the wireless network service with a receiver; and if the wireless network service is denied, the second control device in the first network controlled by the first control device prohibiting the MS to execute the wireless network service with the receiver, wherein the first and second control devices communicate with each other using a predetermined protocol independent of the network technology used by either the first and the second network, and wherein the first network thus maintains the control of the wireless network service through the service management subsystem connected to the second network without implementing additional service management subsystem.”

Neither the Kulkarni nor the Gallagher reference disclose or suggest, “the first network thus maintains the control of the wireless network service through the service management subsystem connected to the second network without implementing additional service management subsystem.” As explained above, neither the Gallagher reference nor the Kulkarni

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reference disclose any type of service management subsystem for providing network services, such as prepaid billing services, data services, etc. or to even discuss the possibility of using one service management subsystem to support two networks with different technologies.

Claims 18-20

Claim 18 states, “a first control device in the second network for providing an instruction to grant or deny a request for the wireless network service in the first network by a mobile switch center (MSC); a service management subsystem for communicating with the first control device providing information pertaining to the MS for the control of the wireless network service; and a second control device in the first network controlled by the first control device for allowing the MS to execute the wireless network service if the wireless network service is granted or for prohibiting the MS to execute the wireless network service if the wireless network service is denied, wherein the first and second control devices communicate with each other using a predetermined protocol independent of the network technology used by either the first and the second network, and wherein the first network thus maintains the control of the wireless network service through the service management subsystem connected to the second network without implementing additional service management subsystem.”

Neither the Kulkarni nor the Gallagher reference disclose or suggest, “wherein the first network thus maintains the control of the wireless network service through the service management subsystem connected to the second network without implementing additional service management subsystem.” As explained above, neither the Gallagher reference nor the Kulkarni reference disclose any type of service management subsystem for providing network services, such as prepaid billing services, data services, etc. or to even discuss the possibility of using one service management subsystem to support two networks with different technologies.

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Claims 21 through 25.

Claim 21 states, "an interface device implemented in at least one mobile switching center (MSC) of the second network enabling the MSC in the second network to communicate with at least one MSC in the first network; and a service management subsystem connected to the MSC in the second network that supports the prepaid calling service in the first network and the second network, wherein the service management subsystem provides control information to the MSC in the first network through the MSC in the second network for managing the prepaid calling service within the first network."

Neither the Kulkarni nor the Gallagher reference disclose or suggest, "a service management subsystem connected to the MSC in the second network that supports the prepaid calling service in the first network and the second network, wherein the service management subsystem provides control information to the MSC in the first network through the MSC in the second network for managing the prepaid calling service within the first network." As explained above, neither the Gallagher reference nor the Kulkarni reference disclose any type of service management subsystem for providing network services, such as prepaid billing services, data services, etc. or to even discuss the possibility of using one service management subsystem to support two networks with different technologies.

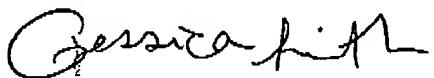
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CONCLUSION

For the above reasons, the claims 1, 9, 11, 18 and 21 are in condition for allowance. Dependent claims 2-8, 10, 12-17, 19, and 20 depend from and further limit their respective independent claims and, therefore, are allowable as well. Please feel free to call Jessica Smith at 972-477-9109 with any comments or questions.

Respectfully submitted,

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